

Literature Research and Review

Anastasia Bernaz

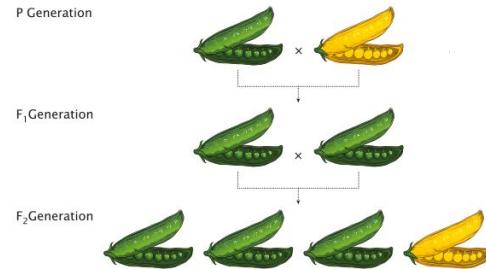
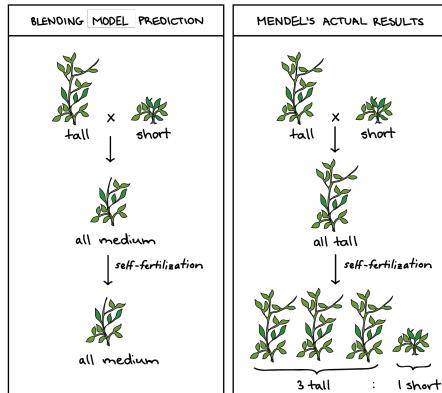
Slides based on Phoebe Oldach & Dominika Wawrzyniak's presentation

Why is literature research important?



Gregor Mendel

1854 - 1863



Despite presenting his findings in 1865 and publishing them in 1866, Mendel's work remained largely overlooked until its rediscovery around 1900 by several independent researchers, notably Erich Tschermak von Seysenegg, Carl Erich Correns, and Hugo de Vries.

How to do literature research?

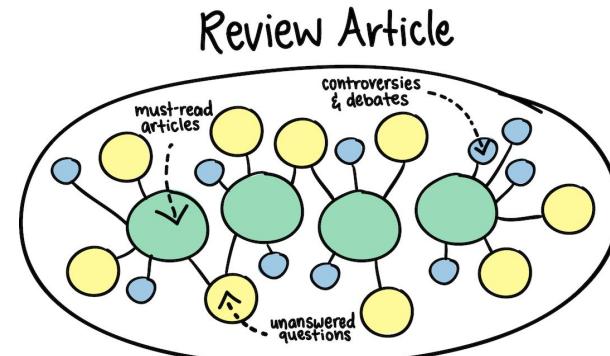
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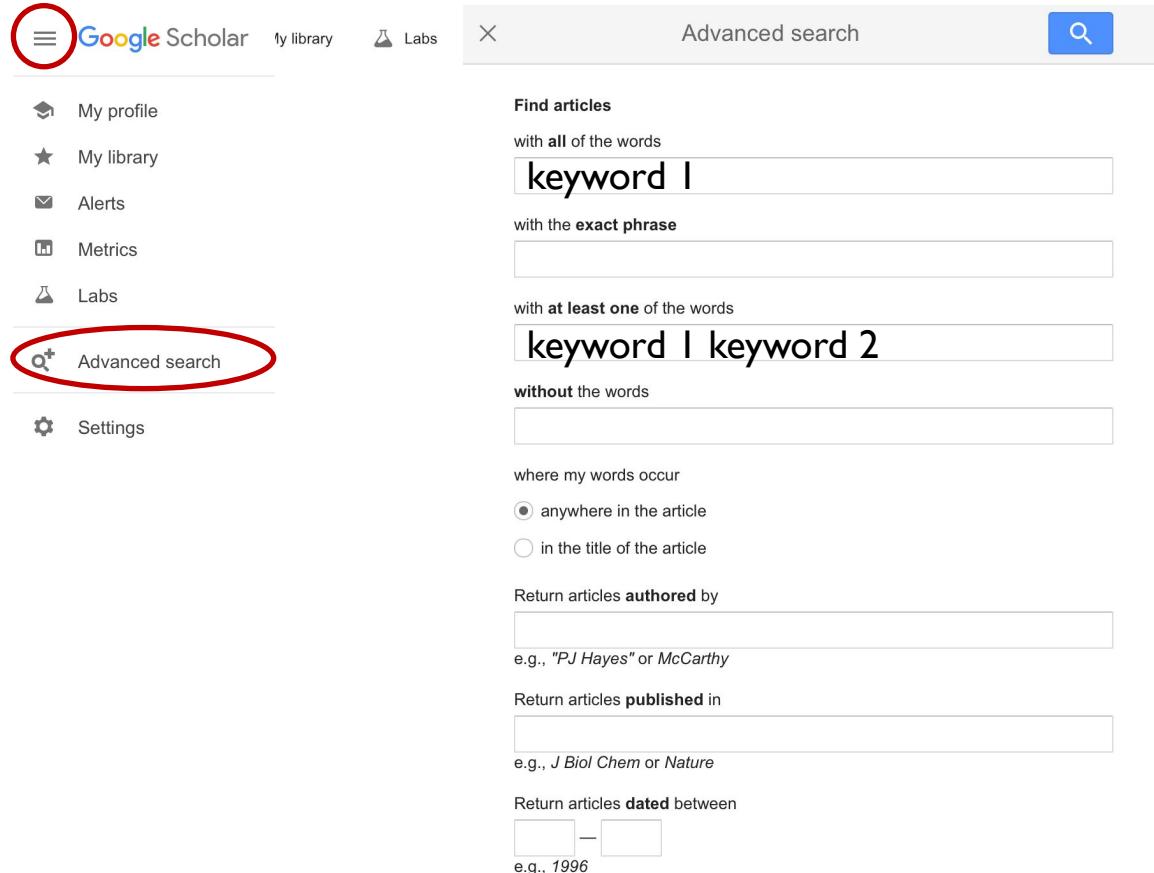
PubMed



How to do literature research?

Google Scholar

A search engine tailored
for academic content,
helping researchers
efficiently find
peer-reviewed papers,
track citations, and access
academic resources



The screenshot shows the Google Scholar homepage. At the top, there is a navigation bar with the Google Scholar logo (a red 'G' inside a circle), a 'My library' link, a 'Labs' link, an 'Advanced search' link, and a search icon. A red circle highlights the 'Google Scholar' logo. Another red circle highlights the 'Advanced search' button, which is located in the middle of the left sidebar. The sidebar also includes links for 'My profile', 'My library', 'Alerts', 'Metrics', and 'Labs'. The main content area is titled 'Find articles' and contains several search input fields and options for refining search results. The search fields are labeled: 'with all of the words' (containing 'keyword 1'), 'with the exact phrase' (empty), 'with at least one of the words' (containing 'keyword 1 keyword 2'), 'without the words' (empty), and 'where my words occur' (with radio buttons for 'anywhere in the article' (selected) and 'in the title of the article'). There are also fields for 'Return articles authored by' (empty) and 'published in' (empty), and a field for 'dated between' with two empty input boxes and a placeholder 'e.g., 1996'.

How to do literature research?

Google Scholar

Boolean Operators:

AND: Narrows results,

requiring *both* terms

OR: Broadens results,

finding *either* term

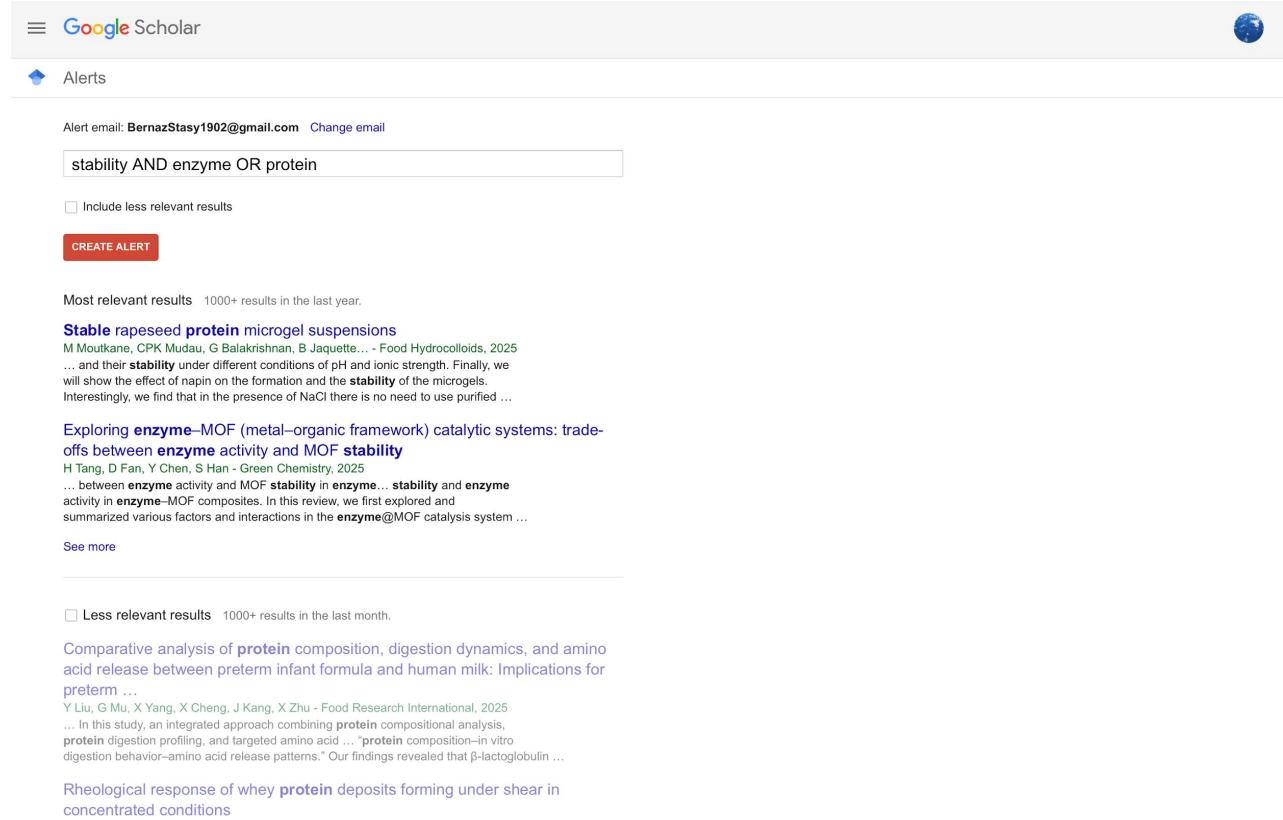
NOT (or -): Excludes terms

The screenshot shows the Google Scholar search interface with a search query of "stability AND enzyme OR protein" highlighted with a red oval. The results page displays several academic papers. The first result is "Protein stability and enzyme activity at extreme biological temperatures" by G Feller, with a link to [PDF] uliege.be. The second result is "A relationship between protein stability and protein function" by BK Shoichet, WA Baase, R Kuroki, et al., with a link to [PDF] pnas.org. The third result is "Understanding and increasing protein stability" by CÓ Fágán, with a link to Elsevier. The fourth result is "Protein structure and the energetics of protein stability" by AD Robertson, KP Murphy, with a link to ACS Publications. The fifth result is "Thermal stability and protein structure" by P Argos, MG Rossmann, UM Grau, H Zuber, et al., with a link to ACS Publications. The sixth result is "Rational engineering of enzyme stability" by VGH Eijsink, A Bjørk, S Gåseidnes, R Sirevåg, et al., with a link to academia.edu. On the left sidebar, there are filters for "Articles", "Any time", "Sort by relevance", "Sort by date", "Any type", "Review articles", and checkboxes for "include patents" and "include citations". A "Create alert" button is also visible on the sidebar, highlighted with a red oval.

How to do literature research?

Google Scholar

Alerts help stay on top of
the latest findings without
having to do a manual
search every day



≡ Google Scholar

Alerts

Alert email: BernazStasy1902@gmail.com Change email

stability AND enzyme OR protein

Include less relevant results

CREATE ALERT

Most relevant results 1000+ results in the last year.

Stable rapeseed protein microgel suspensions
M Moutkane, CPK Mudau, G Balakrishnan, B Jaquette... - *Food Hydrocolloids*, 2025
... and their **stability** under different conditions of pH and ionic strength. Finally, we will show the effect of napin on the formation and the **stability** of the microgels. Interestingly, we find that in the presence of NaCl there is no need to use purified ...

Exploring enzyme-MOF (metal-organic framework) catalytic systems: trade-offs between enzyme activity and MOF stability
H Tang, D Fan, Y Chen, S Han - *Green Chemistry*, 2025
... between **enzyme** activity and MOF **stability** in enzyme... **stability** and **enzyme** activity in enzyme-MOF composites. In this review, we first explored and summarized various factors and interactions in the **enzyme**@MOF catalysis system ...

[See more](#)

Less relevant results 1000+ results in the last month.

Comparative analysis of **protein** composition, digestion dynamics, and amino acid release between preterm infant formula and human milk: Implications for preterm ...
Y Liu, G Mu, X Yang, X Cheng, J Kang, X Zhu - *Food Research International*, 2025
... In this study, an integrated approach combining **protein** compositional analysis, **protein** digestion profiling, and targeted amino acid ... "protein composition-in vitro digestion behavior-amino acid release patterns." Our findings revealed that β -lactoglobulin ...

Rheological response of whey **protein** deposits forming under shear in concentrated conditions

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summarizes how multiple
papers answer your
question

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Ask a detailed research question to find relevant papers

Example questions

Has anyone used single molecule footprinting to examine transcription factor binding in human cells?

Are hydrogen powered cars, compared to electric / internal combustion engine cars, really better for the environment?

What is the standard of care for intraductal papilloma without atypia? When is surgical excision recommended, and when can it be managed conservatively?

Find papers from the past 2 years about how to determine whether an abstractive summary generated by an LLM is grounded.

Ask Scholar

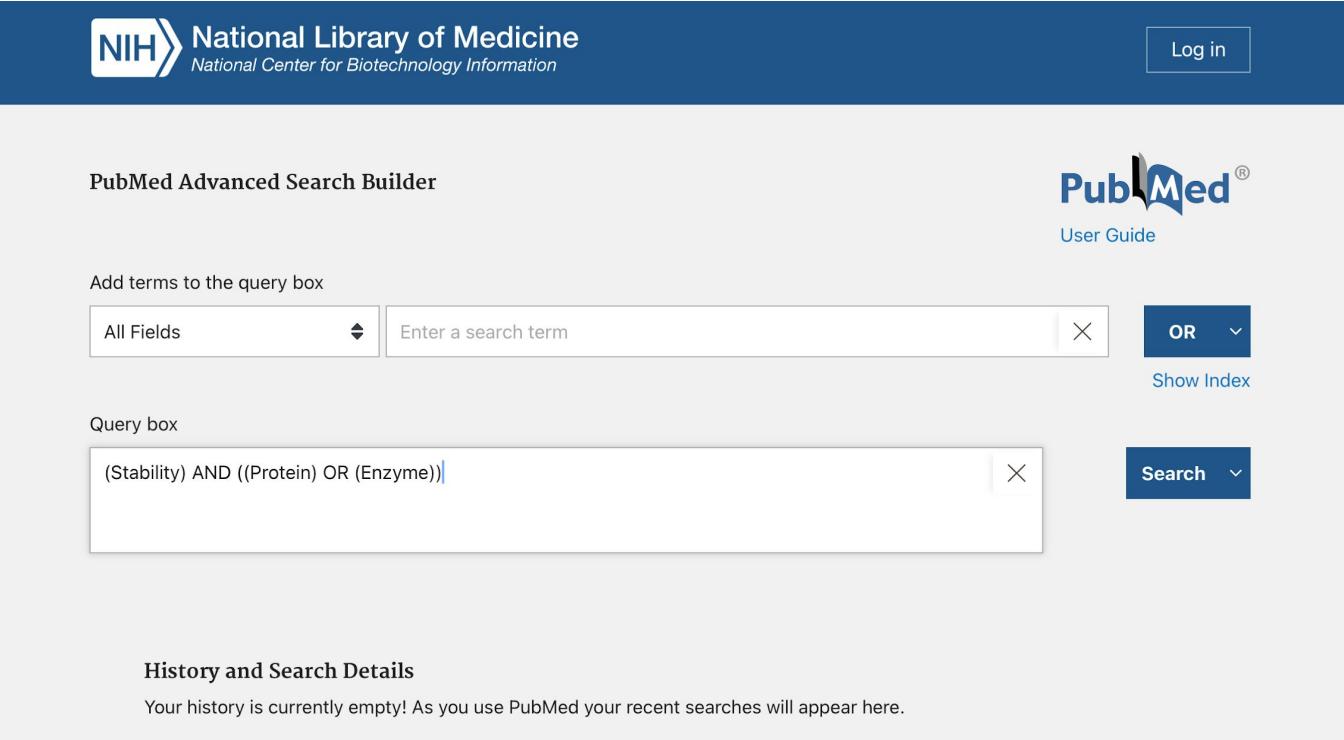


Scholar Labs is experimental and can make mistakes. [Help & Privacy](#)

How to do literature research?

PubMed

A specialized search engine tailored for the fields of medicine, biotechnology, and the life sciences, offering direct access to peer-reviewed publications and clinical data



The screenshot shows the PubMed Advanced Search Builder interface. At the top, the NIH National Library of Medicine logo and the text "National Center for Biotechnology Information" are visible, along with a "Log in" button. To the right, the PubMed logo and a "User Guide" link are present. The main search area features a dropdown menu "All Fields" and a search input box "Enter a search term" with a clear button. Below this is a "Query box" containing the search term "(Stability) AND ((Protein) OR (Enzyme))". To the right of the query box are buttons for "OR" and "Search". At the bottom, a section titled "History and Search Details" with the sub-instruction "Your history is currently empty! As you use PubMed your recent searches will appear here." is shown.

PubMed Advanced Search Builder

PubMed User Guide

Add terms to the query box

All Fields

Enter a search term

OR

Show Index

Search

Query box

(Stability) AND ((Protein) OR (Enzyme))

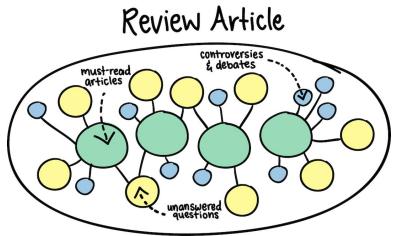
History and Search Details

Your history is currently empty! As you use PubMed your recent searches will appear here.

How to do literature research?

Review articles

Review articles from renowned journals are a great way to gain an overview about a given field



Check out the **References** section for field leaders and more background information

- Abstract
- Introduction
- Intrinsic Protein Disorder
- Experimental Approaches for Assessing Intrinsic Protein Disorder
- Computational Tools for Disorder Prediction
- Evolution of IDPs/IDRs
- IDPs/IDRs in Diseases
- IDPs/IDRs as Drug Targets
- Conclusions
- Author Contributions
- Funding
- Institutional Review Board Statement
- Informed Consent Statement
- Data Availability Statement
- Acknowledgments
- Conflicts of Interest
- Abbreviations
- References



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How to do literature research?

Research Rabbit

Allows you to explore and organize papers, discover new articles to read based on topic or author, and export citations to accelerate your research

It is also a great tool for visualizing your bibliography

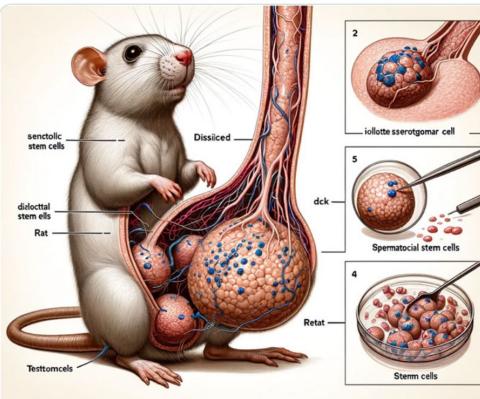
The screenshot shows the Research Rabbit application interface. At the top, a search bar displays the query "cosolvent effects on protein stability". Below the search bar, a list of "3 Articles" is shown, each with a title, author, and a brief abstract. The first article is by Tanford (1969), the second by Pace (1985), and the third by Timasheff (1992). The interface includes navigation buttons for "Similar" and "More citations".

On the right side, a detailed view of a specific article by Canchi (2013) is displayed. The article title is "Cosolvent effects on protein stability" from the "Annual review of physical chemistry (Print)". It is authored by Deepak R. Canchi and A. Garcia. The abstract discusses the stability of proteins in aqueous solutions and the role of cosolvents. A "Save to..." button is visible at the top right of this panel.

Below the article view, a network visualization shows citation links between the papers. Nodes represent the papers, and arrows indicate the direction of citations. The nodes are represented by circles with a protein structure icon inside. The nodes are arranged in a circular pattern, with arrows pointing from earlier papers to later ones. The nodes are labeled with their authors and years: Pace 1985, Timasheff 1992, O'Brien 2007, Hunger 2012, and Canchi 2013. A "Dive deeper on this article" button is located at the bottom right of the visualization.

How to find a good paper?

Dr Charlotte Houldcroft · Feb 15, 2024
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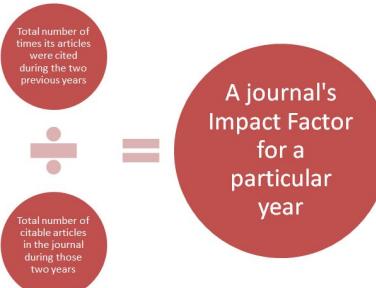


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- Overclaiming results
- AI-generated content



Supporting Information

Details of kinetic and computational studies, inhibition experiments, and X-ray structural data as well as standard reaction conditions. The atomic coordinates and structure factors have been deposited at the Protein Data Bank, <http://www.pdb.org> (PDB ID codes [3G01](#) and [3G02](#)). This material is available free of charge via the Internet at <http://pubs.acs.org>.

» [ja809673d_si_001.pdf](#) (264.6 kb)

Ethics declarations

Competing interests

The authors declare no competing financial interests.

How to do literature review?

Three-Pass Approach

First pass: Gives a general idea about the paper

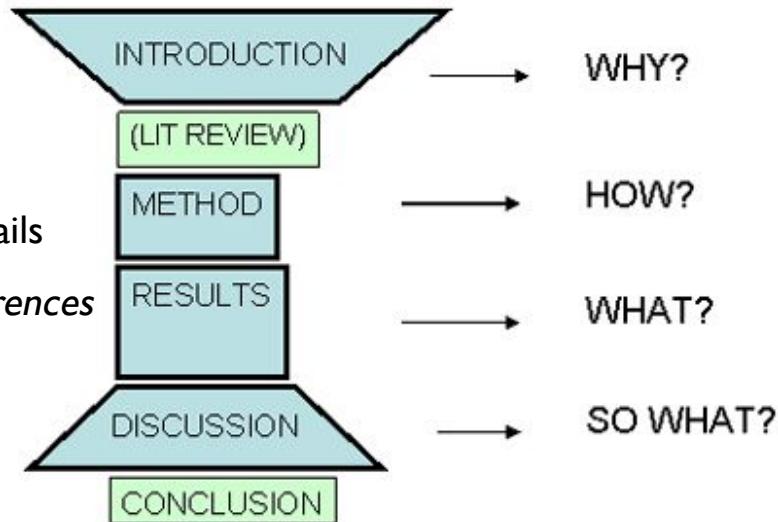
- Focus on *Abstract, Introduction, and Conclusion*

Second pass: Let you grasp the paper's content but not its details

- Focus on *Introduction, Figures, Results/Discussion, and References*

Third pass: Helps you understand the paper in depth

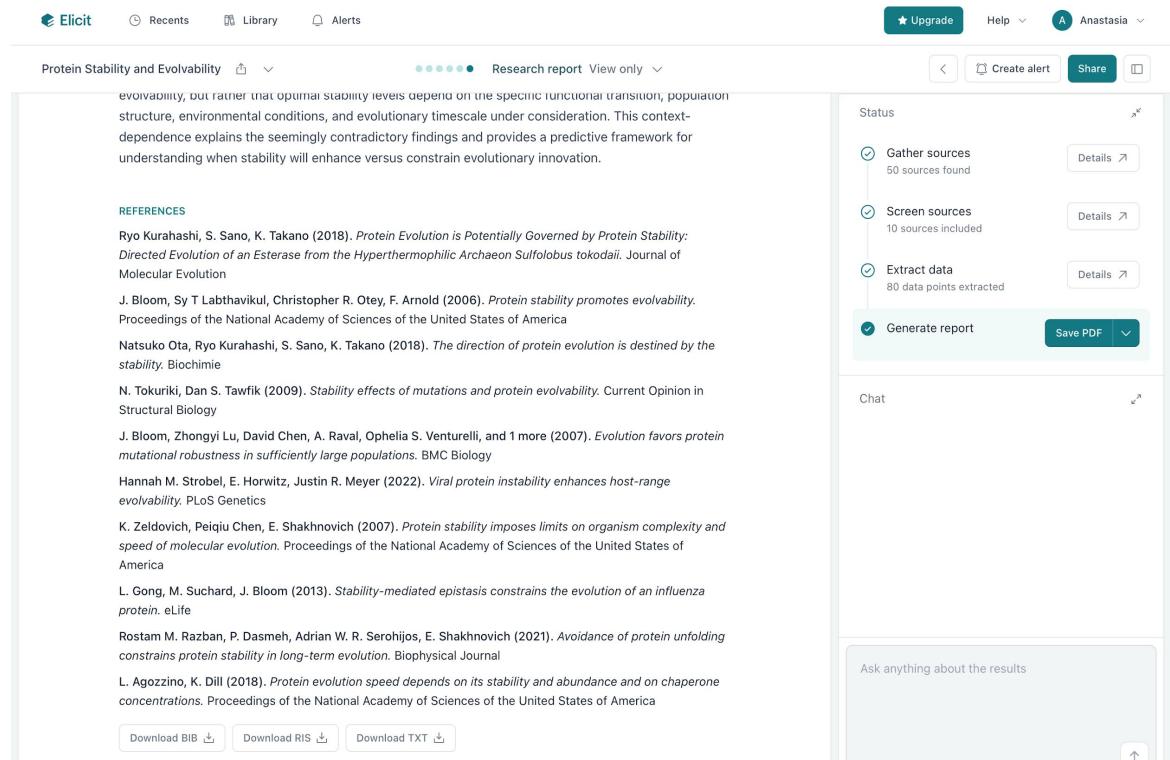
- Focus on *Methods and Results*



How to do literature review?

Elicit

An AI-powered research assistant designed to summarize papers, extract key data from tables, and find additional relevant literature based on specific research questions and not just keywords



Protein Stability and Evolvability

evolvability, but rather that optimal stability levels depend on the specific functional transition, population structure, environmental conditions, and evolutionary timescale under consideration. This context-dependence explains the seemingly contradictory findings and provides a predictive framework for understanding when stability will enhance versus constrain evolutionary innovation.

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Thank you for your attention!